

METHOD OF FORMING A THIN FILM USING ATOMIC LAYER
DEPOSITION

5 ABSTRACT OF THE DISCLOSURE

The present invention provides a method of forming a thin film using atomic layer deposition (ALD). An ALD reactor having a single reaction space is provided. A batch of substrates is concurrently loaded into the single reaction space of the ALD reactor.

10 Then, a gas containing reactants is introduced into the single reaction space, and a portion of the reactants is chemisorbed on top surfaces of the batch of substrates within the single reaction space. Non-chemically adsorbed reactants are then removed from the single reaction space.

In accordance with one embodiment of the present invention, after introducing
15 the gas containing reactants, non-chemically adsorbed reactants are diluted in the single reaction space to facilitate the removal of non-chemically adsorbed reactants.

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